**3GPP TSG-RAN WG2 Meeting #117-e *R2-220xxxx***

**Electronic meeting, 21 February – 3 March 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.331** | **CR** | **Draft** | **rev** | **-** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Draft 38.331 CR for Rel-17 NR IIoT URLLC UE capabilities | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Intel Corporation | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | | 2022-02-14 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Introduce UE capabilities for Rel-17 NR IIoT URLLC. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | UE capabilities for Rel-17 NR IIoT URLLC are defined. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | UE capabilities for Rel-17 NR IIoT URLLC are not introduced. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.306 CR xxx | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

# 6 Protocol data units, formats and parameters (ASN.1)

*First change*

### 6.3.3 UE capability information elements

***<Unmodifed part omitted>***

– *MAC-Parameters*

The IE *MAC-Parameters* is used to convey capabilities related to MAC.

***MAC-Parameters* information element**

-- ASN1START

-- TAG-MAC-PARAMETERS-START

MAC-Parameters ::= SEQUENCE {

mac-ParametersCommon MAC-ParametersCommon OPTIONAL,

mac-ParametersXDD-Diff MAC-ParametersXDD-Diff OPTIONAL

}

MAC-Parameters-v1610 ::= SEQUENCE {

mac-ParametersFRX-Diff-r16 MAC-ParametersFRX-Diff-r16 OPTIONAL

}

MAC-ParametersCommon ::= SEQUENCE {

lcp-Restriction ENUMERATED {supported} OPTIONAL,

dummy ENUMERATED {supported} OPTIONAL,

lch-ToSCellRestriction ENUMERATED {supported} OPTIONAL,

...,

[[

recommendedBitRate ENUMERATED {supported} OPTIONAL,

recommendedBitRateQuery ENUMERATED {supported} OPTIONAL

]],

[[

recommendedBitRateMultiplier-r16 ENUMERATED {supported} OPTIONAL,

preEmptiveBSR-r16 ENUMERATED {supported} OPTIONAL,

autonomousTransmission-r16 ENUMERATED {supported} OPTIONAL,

lch-PriorityBasedPrioritization-r16 ENUMERATED {supported} OPTIONAL,

lch-ToConfiguredGrantMapping-r16 ENUMERATED {supported} OPTIONAL,

lch-ToGrantPriorityRestriction-r16 ENUMERATED {supported} OPTIONAL,

singlePHR-P-r16 ENUMERATED {supported} OPTIONAL,

ul-LBT-FailureDetectionRecovery-r16 ENUMERATED {supported} OPTIONAL,

-- R4 8-1: MPE

tdd-MPE-P-MPR-Reporting-r16 ENUMERATED {supported} OPTIONAL,

lcid-ExtensionIAB-r16 ENUMERATED {supported} OPTIONAL

]],

[[

spCell-BFR-CBRA-r16 ENUMERATED {supported} OPTIONAL

]],

[[

srs-ResourceId-Ext-r16 ENUMERATED {supported} OPTIONAL

]],

[[

intraCG-Prioritization-r17 ENUMERATED {supported} OPTIONAL,

jointPrioritizationCG-Retx-Timer-r17 ENUMERATED {supported} OPTIONAL,

survivalTime-r17 ENUMERATED {supported} OPTIONAL

]]

}

MAC-ParametersFRX-Diff-r16 ::= SEQUENCE {

directMCG-SCellActivation-r16 ENUMERATED {supported} OPTIONAL,

directMCG-SCellActivationResume-r16 ENUMERATED {supported} OPTIONAL,

directSCG-SCellActivation-r16 ENUMERATED {supported} OPTIONAL,

directSCG-SCellActivationResume-r16 ENUMERATED {supported} OPTIONAL,

-- R1 19-1: DRX Adaptation

drx-Adaptation-r16 SEQUENCE {

non-SharedSpectrumChAccess-r16 MinTimeGap-r16 OPTIONAL,

sharedSpectrumChAccess-r16 MinTimeGap-r16 OPTIONAL

} OPTIONAL,

...

}

MAC-ParametersXDD-Diff ::= SEQUENCE {

skipUplinkTxDynamic ENUMERATED {supported} OPTIONAL,

logicalChannelSR-DelayTimer ENUMERATED {supported} OPTIONAL,

longDRX-Cycle ENUMERATED {supported} OPTIONAL,

shortDRX-Cycle ENUMERATED {supported} OPTIONAL,

multipleSR-Configurations ENUMERATED {supported} OPTIONAL,

multipleConfiguredGrants ENUMERATED {supported} OPTIONAL,

...,

[[

secondaryDRX-Group-r16 ENUMERATED {supported} OPTIONAL

]],

[[

enhancedSkipUplinkTxDynamic-r16 ENUMERATED {supported} OPTIONAL,

enhancedSkipUplinkTxConfigured-r16 ENUMERATED {supported} OPTIONAL

]]

}

MinTimeGap-r16 ::= SEQUENCE {

scs-15kHz-r16 ENUMERATED {sl1, sl3} OPTIONAL,

scs-30kHz-r16 ENUMERATED {sl1, sl6} OPTIONAL,

scs-60kHz-r16 ENUMERATED {sl1, sl12} OPTIONAL,

scs-120kHz-r16 ENUMERATED {sl2, sl24} OPTIONAL

}

-- TAG-MAC-PARAMETERS-STOP

-- ASN1STOP

End of Change